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ABSTRACT

The negative sequelae that relocation to a nursing home has on the elderly is well documented. This study evaluated the effects of stress reduction information on the newly admitted patients' state anxiety based on self-reported distress using the Stresses in Institutional Care Scale. Anxiety was assessed using the Anxiety State Scale of the State-Trait Anxiety Inventory Scale. The sample population consisted of 12 subjects from three nursing homes, randomly assigned to one of two groups. One group received information about the factors considered stressful and the other group did not receive this information. A T-test compared the pre/post test variable of state anxiety between the two groups to test the hypothesis that the group receiving stress reduction information would have lower anxiety than the group not receiving this information. The results did not support this hypothesis. No significant differences were found between the information and the no-information groups in pretest scores of state anxiety or between the two groups on state anxiety scores following the intervention. The results do support previous studies indicating that entering a nursing home is a stressful event. The effects of stress factors and of stress reduction information upon admittees' anxiety during relocation to a nursing home revealed in the study could be used in developing programs to lower admittees' anxiety and improve their relocation adjustment. (Author/NB)

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Effects of Stress Reduction Information on Anxiety

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Running head: STRESS REDUCTION INFORMATION

Abstract

The negative sequelae that relocation to a nursing home has on the elderly is well documented in the literature. The purpose of this study was to evaluate the effects of stress reduction information on the newly admitted patients' state anxiety based on self reported distress using the Stresses in Institutional Care Scale (SIC). Anxiety was assessed using the Anxiety State Scale of the State-Trait Anxiety Inventory Scale. The sample population consist of twelve subjects from three nursing homes, randomly selected into two groups. One group received information about the factors considered stressful and the other group did not receive this information. A T-test compared the pre/post test variable of state anxiety between the two groups to test the hypothesis:

1. The group receiving stress reduction information will have lowered anxiety than the group not receiving this information.

The results did not support this hypothesis. However, analysis of demographic variables provided several factors which may have affected the study variable (anxiety). The knowledge derived from this research increases nursing's understanding of the effects of the stress factors and the effects of stress reduction information upon admittees' anxiety during relocation. This information could be used to develop programs to lower admittees' anxiety which may improve their relocation adjustment.

EFFECTS OF STRESS REDUCTION INFORMATION ON ANXIETY

Numerous studies have substantiated the relationship of relocation to a nursing home to increased health problems and mortality of older adults.¹⁻⁵ Although stress has been mentioned as a causative factor¹⁻², a paucity of literature exists relating the elderly's perceived stress factors to their anxiety levels during nursing home relocation.

Lazarus stated that individuals use their cognitive processes to determine whether a future event is benign or threatening by determining their perceptions of the event and its harmful influence and then analyzing their abilities to fight and/or cope with the event.⁶ If individuals determine the event as threatening and their abilities limited, anxiety develops.

State anxiety is a brief response occurring with a known stimulus, such as nursing home relocation. In a positive reaction, individuals respond to a perceived threatening event by strengthening their resources and coping capacities. Failure to adapt to a threatening event is more likely to occur as the stimulus becomes more threatening; as the length and time of the stimulus response increases; and as the number of stimuli multiply.⁶

Lieberman attributed psychological stress to 32% of his subjects' mortality rates within the first year of relocation.¹ However, subject information and criteria for measuring psychological stress was not revealed.

Researchers agree that relocation to a nursing home should be planned with the potential admittees to lower stress.^{4-5, 7-8} But measuring stress has been found difficult.⁹ Therefore, Stein et al. found it more beneficial to measure anticipated

stress.¹⁰ In 1985, they devised Stresses in Institutional Scale Questionnaire (SIC) to measure the anticipated stresses that nursing home admittees perceive in relocation. This tool was found to be a valuable indicator of stress factors—potential problems that nursing home admittees perceive as threats to their existence in a nursing home.

Amenta et al, using staff reports of patients in relocation, analyzed patients in the following areas: physical status, mental status, affective behavior, interpersonal functioning, and social interaction. Mortality rates and functioning were stable in this planned, interfacility relocation study. Limitations encountered were: limited number of comparison groups, nonstandardized instruments, and subjective reports from staff. Positive results were speculated to be related to participants' attention, their learning capacities, and proposed options⁷. No patients' self-reports were obtained and evaluated.

In studying state anxiety, Hartfield and Cason found that the types of stress reduction information provided to patients affected their cognitions, causing mixed results that needed additional exploration.¹¹

Therefore, this study seeks to clarify the relationship between stress reduction information and nursing home admittees' state anxiety. This research seeks to answer:

1. What are the perceived stressful factors noted by nursing home admittees?
2. What are the effects of giving information about these stress factors to nursing home admittees' state anxiety levels?

It is hypothesized that subjects receiving stress reduction information will have lower state anxiety scores than subjects not receiving this information. Nursing

could then use this information in predicting the results of giving particular stress reduction information to admittees.

METHODS

Sample

A sample of thirteen newly admitted patients over the age of sixty was obtained from three nursing homes, licensed as level II & III in northern Massachusetts. All admittees to these facilities during the months of May to August 1986 were selected as subjects, if this admission was their first admission to a nursing home and if they had been admitted within 72 hours and had accepted to participate. Subjects had to be literate, English-speaking individuals who were able to speak, hear, and see well enough to participate. As determined by the Kahn-Goldfarb Mental Status Questionnaire, they could not be within the severe range of impaired mental functioning; nor, could they be taking narcotics or psychotropic medications. All were able to understand the risks, benefits, and confidentiality of this study and able to read and sign an informed consent.

Subjects were randomly assigned to the group receiving information or to the group not receiving information by an initial coin flip at the start of interviews in each nursing home by the researcher. One subject was not included in the study due to hospitalization. The final sample size consisted of twelve subjects between 61 and 93 years of age. The mean age of the sample was 79 years (SD=4.85). Of the twelve subjects who participated, the majority were female (86%, N=10) and were widowed (67%, N=8). Of the total sample, 66.6% (N=7) were classified as level II residents and 33.3% (N=5) were level III. Forty percent (N=5) had been prepared

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Table 1. Means, Standard Deviations, and Percentages of Demographic Characteristics of the Sample

	GROUP I			GROUP II			TOTAL SAMPLE		
	X	SD	Range	X	SD	Range	X	SD	Range
AGE	82	2.85	61-93	77	0.89	62-89	79	4.85	61-93
SEX									
Male		14%			20%			17%	
Female		86%			80%			83%	
MARITAL STATUS									
Single		42%						25%	
Married					20%			8%	
Widowed		57%			80%			67%	
PERCEIVES SELF AS		57%			60%			58%	
ABLE TO DISCUSS		71.4%			80%			75%	
ADMISSION WITH FAMILY									
PERCEPTIONS OF NURSING HOME									
Bad		0			0			0	
Good		57.1%			20%			42%	
Indifferent		42.8%			60%			58%	
PERCEPTIONS FORMED BY:									
Family and Friends		60%			72.72%			58.3%	
Media		0			0			0	
Preparation		10%			18.18%			8.3%	
Past Experiences		30%			0			25%	
Other		0			9%			8.3%	
WHO ADMITTED PATIENT									
Children		33.3%			28.5%			29%	
Physician		25%			28.5%			24%	
Self		16.6%			28.5%			19%	
Grandchildren		0			0			0	
Other		24.9%			0			19%	
Unknown		0			14.28%			5%	
REASON FOR ADMISSION									
Unable to care for self		50%			40%			47%	
Illness		50%			40%			33%	
Other		20%			20%			20%	
RESIDENCE BEFORE									
Home		42.9%			60%			50%	
Hospital		57.1%			40%			50%	
PREPARATION		42.8%			40%			41.6%	
PLACEMENT VIEWED AS									
Temporary		28.57%			40%			33%	
Permanent		71.42%			40%			58%	
Unknown		0			20%			8%	
LEVEL OF CARE									
Level II		57.14%			80%			66.6%	
Level III		42.85%			20%			33.3%	

for relocation and sixty percent viewed placement as permanent. The reason for admission most frequently given was inability to care for self (47%, N=6). Half the sample (N=7) perceived nursing homes as neither "good" or "bad". Sample characteristics shown in Table I.

Procedures

A pilot study was conducted to determine the feasibility of the procedural techniques in early May. It was found that subjects were not able to use the SIC tool's Likert scale, so it was modified to a "yes"/"no" format to maximize responses. All instruments were administered in each subject's room, within seventy-two hours after admission. The purpose of the study, risks, and benefits were explained and written consent was obtained. Each subject was given the opportunity to ask questions and confidentiality was ensured.

The State Anxiety Inventory Test (SAI) test was administered first, followed by the SIC questionnaire. Subjects were then asked to rank, in priority order, the three most severe stresses anticipated over the next month or currently experienced (#1-the most stressful to #3-least stressful). Information about elicited stresses was then given to those subjects who were assigned to the information group. One week later with questions randomly rearranged, the researcher readministered the SAI to all subjects.

Instruments

The Spielberger State Anxiety Inventory Test was used to measure state anxiety.¹² It is a 20 item Likert scale questionnaire with responses for each item ranging from one to four (one indicating no anxiety and four indicating severe anxiety). The state section has been found to be a sensitive indicator of changes in patients receiving counseling, psychotherapy, and behavior-modification programs

for young adults and older individuals, up to 69 years. This questionnaire has selected items with reverse scoring, decreasing false responses. Subjects respond to each item as they feel at the time of testing. Possible scores range from 0 to 80. The higher the score, the more severe the anxiety. For males aged 50 to 69, the mean found was 34.51 (SD=10.35), with an alpha of 0.94. For a female of the same age, the mean found was 32.20 (SD=8.67), with an alpha of 0.90. Test-retest reliabilities are reported to range from .73 to .97.¹²

The Stresses in Institutional Care Scale (SIC) was used to measure stress factors perceived or currently experiencing as stressful to subjects in nursing home relocation.¹⁰ During the pilot study, it was found that four out of four participants had difficulty in responding to the Likert scale. Therefore, this instrument was modified to a "yes"/"no" format to maximize responses ("yes" indicating the item was stressful and "no" signifying that the item did not evoke stress). An additional category of "other" was added to ensure completeness of stress factor items. Each subject was also asked to rank the three most severe stress factors perceived or those factors which he was currently experiencing as stressful (#1 indicating the most severe stress factor to #3 signifying the least stressful factor of those items ranked).

RESULTS

A summary of the stress factors reported by subjects is presented in Table 2. As shown, 22% of the subjects (N=12) reported "being in a nursing home" as the most stressful factor. Loss of possessions and being physically dependent/maintaining self, ranked second and third respectively. The information and the no information groups differed in their perceptions of the second most severe stress

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Table 2. Percentage of Most Severe
Stress Factors of Sample Population

	Total Sample N=12	No-Information Group n=7	Information Group n=5
<u>Most Severe Stress Factor</u>	Being in a Nursing Home 22.3%	Being in a Nursing Home 23.8%	Being in a Nursing Home 20%
<u>Second Most Severe Stress Factor</u>	Loss of Possessions 11.8%	Being Physically Dependent 14.2%	Loss of Possessions 20%
<u>Third Most Severe Stress Factor</u>	Being Physically Dependent and Maintaining Self 8.3%	Sleeping Difficulties, Difficulties with Other Patients, and Concern Over Course of Illness 14.2%	Maintaining Self 13.3%

Stress Reduction Information

Table 3. Means, Standard Deviations, and Ranges of Anxiety Scores

	Pretest Anxiety Scores			Post-test Anxiety Scores		
	X	SD	Ranges	X	SD	Ranges
No-Information Group	59.43	13.4	40-79	47.43	12.51	29-54
<i>n=7</i>						
Information Group	52.6	17.98	29-62	52.2	14.89	31-64
<i>n=5</i>						

factor with physical dependency rated second by the no information group and loss of possessions noted second by the information group.

Data was analyzed using the Human Systems Dynamics Stats software computer package. Table 3. shows a summary of the pre/posttest anxiety scores. As shown the pretest anxiety scores were relatively high for the no information group (M=59.43, SD=13.4) and the information group (M=52.6, SD=17.98). T-test values were obtained in order to determine whether differences in state anxiety scores occurred between those admittees who received stress reduction information and those who did not. No significant differences in pretest scores of state anxiety were obtained between the information and the no information groups [$t(10) = -.7580$, $p < .05$]. These results indicate that both groups were relatively similar regarding levels of anxiety. State anxiety scores following the intervention indicated no significant differences between the two groups [$t(10) = .6029$, $p < .05$]. Based on these findings, a paired t test was done to compared the pre/post anxiety scores. No significant differences in anxiety were found in the information group [$t(4) = -.7580$, $p < .05$] but were found in the no information group [$t(6) = -4.36$, $p < .05$] indicating a moderate but significant reduction in posttest anxiety. Therefore, the hypothesis that the subjects receiving stress reduction information will have lower state anxiety scores than subjects not receiving this information was not supported.

DISCUSSION

Possible range of state anxiety scores were 0 to 80 with the total M of this sample found to be relatively high (56.58). These results support previous studies that indicated that entering a nursing home is a stressful event.¹⁻⁵

As indicated in the pre/posttest anxiety scores between the groups, the $\bar{X}$ of both groups decreased. This would suggest that just talking to admittees is beneficial in lowering their state anxiety.

Although there was no reported significant reduction in state anxiety in the group receiving information, these results are unclear. A disproportionate number of male and female subjects occurred in the total sample and demographic characteristics between the groups were dissimilar. For example, the information group subjects were more likely to be female and widowed; to be indifferent to placement; to be admitted from home; to view placement as more temporary; and to be admitted at a higher level of ill health than subjects in the no information group. These findings would tend to support Lazarus's theory that failure to adapt is more likely to occur as the stimulus becomes more threatening; as the time and length of the stimulus increases; and as the number of stimuli increase and compete for the individual's attention.⁶ To clarify the effects of these additional factors, further exploration is necessary.

The presentation method could have also influenced the process. Only during the initial testing was information given to admittees. During these interviews 66.6% (N=8) of subjects cried. In future studies, stress reduction information might need to be introduced on a more frequent and expanded time schedule due to subjects' emotions and relatively high state anxiety.

Additionally, this study could not control for conversations occurring between subjects, added or unknown sources of admittees' anxiety, nor the Hawthorn effect occurring during the week before repeat testing.

In summary, this study, like others found stress difficult to measure because of the complexity of variables present and the difficulty in controlling these and possibly other unknown variables.⁹

The reported 22.3% findings of "being in a nursing home" as the most stressful factor in the total sample, with little variations between the groups, suggests that nursing home placement is perceived as a threat to admittees. These perceptions could possibly be changed by providing information and a supportive environment. Using the SIC tool, this study was able to measure subjects' anticipated and currently experienced stress factors. Once the stressful factors were recognized, information was given. Nursing could use this tool to planned collaboratively with admittees to lower their state anxiety levels, while increasing their capacity to cope with nursing home relocation. This supports other researchers who have recommended that placement could be planned to lower stress by offering alternatives, by providing information, and by giving additional attention and support to admittees.^{4-5, 7-8, 10}

Preparation found in the total sample was 41.6 %. In the information group, 80% of the subjects were admitted from home; yet, preparation remained at 40%. This would suggest that even when time permits for more preparation, little is given prior to admission. The reason for this occurrence is obscure.

The second most stated stressful factor was "loss of possessions" (11.8%) in the total sample. Therefore, environment appears to be influential in this sample. Further exploration needs to clarify the effects of possessions on state anxiety. Knowing what personal possessions permitted into the nursing home affect anxiety could improve the relocation process.

As a small pilot study with various limitations, these findings remain useful. However, additional knowledge is necessary to clarify the relationship between state anxiety and stress factors and the effects of providing stress reduction information to nursing home admittees.

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